Processing Elements (CTPEs) are the mission data processors that produce timely and accurate warning and cueing reports, which are then disseminated to warfighters worldwide by existing communication networks dedicated to tactical applications. The Central Theater Processing Program (CTPP) is the effort that supports the ALERT, Shield and Initial Qualification Training (IQT) processing elements. ALERT performs the operational mission while Shield provides the research and development environment to evaluate and demonstrate new sources of data and improved processing techniques for ALERT. The IQT system provides initial operator training.

Space operators at the 11th Space Warning Squadron keep watch 24 hours a day, seven days a week in the ALERT operations center at Falcon AFB, CO.

ALERT is a high confidence operational system that provides assured theater missile warning to warfighters worldwide. ALERT is the only component of the Tactical Event System that monitors all Major Regional Conflict and Rest of World areas simultaneously. Its current features include worldwide data coverage from a full DSP constellation augmented by other data sources and fusion of data at the sensor level from multiple real-time sources utilizing an open system architecture using modern, commercial equipment. Threat missile descriptors, such as launch point location, heading, state vector (position and velocity) and predicted impact area, have been improved by the use of algorithms that optimize multiple DSP satellite processing and additional sources of both event and environment data.

Shield is a research, development and support facility that evaluates and demonstrates the potential benefits of fusing multiple data sources and using advanced techniques in support of theater missile warning and defense. Shield is operated by the Space Warfare Center and receives part of its requirements and funding from the Ballistic Missile Defense Organization (BMDO). Shield has the following three principal functions: develop prototypes for new CTPE-based capabilities in support of AFSPC requirements; test and debug new software releases for ALERT; and assess the operational feasibility of augmenting space based infrared data with a variety of additional data sources. Shield also serves as a system backup for ALERT operations and training. In addition, Shield may continue its research and development mission in support of the SBIRS program and other users by serving as a test bed for new candidate applications of spaceborne infrared data and processing/ communications improvements.

Shield/ALERT Schedule of Tasks

FY 1997	FY 1998	FY 1999
Shield Equip. Upgrade		
Logistics		
Operator Efficiency	Operator Efficiency	
Mission Improvements	Mission Improvements	Mission Improvements
	Additional Sources	Additional Sources
	Cross Cueing Tactical	Cross Cueing National/International
Battlespace Characterization	Battlespace Characterization	Battlespace Characterization
MEIWIC/Weather & Imagery	MEIWIC	MEIWIC
Test Tools		